

Atty Docket No. JCLA6195

Serial No. 09/886,776

In The Claims:

Please amend the claims as follows.

1. (currently amended) An CMOS image sensor wherein image lag at low light levels is reduced by controlling a reset level, and wherein an amplifier is used for determining whether to use a hard reset or a soft reset.

2. (currently amended) An improved CMOS image sensor wherein image quality is improved at low light levels without compromising performance at high illumination by using a hard or soft reset dependent on a gain signal level.

3. (currently amended) An image CMOS sensor with reduced image lag comprising:
an imaging device for acquiring image data;
a reset transistor for resetting the image device;
a readout transistor for providing pixel information as an output; and
a selection transistor for selecting between imaging devices, wherein image lag is reduced by controlling a reset level; and
an amplifier for determining whether to use a hard reset or a soft reset.

Claim 4 (canceled)

5. (original) The CMOS image sensor of claim 3, wherein the imaging device is a photodiode.

6. (currently amended) The CMOS image sensor of claim 3, wherein all transistors are of a same type.

Atty Docket No. JCLA6195

Serial No. 09/886,776

7. (original) The CMOS image sensor of claim 3, wherein the reset level is independent of a preceding signal level.

8. (original) The CMOS image sensor of claim 3, wherein a drain of the reset transistor is connected to a voltage that is less than a supply voltage minus a threshold voltage.

9. (currently amended) The CMOS image sensor of claim 3, wherein a reset drain voltage ~~can be~~ is switched between a supply voltage and a voltage that is less than the supply voltage minus a threshold voltage.

10. (original) The CMOS image sensor of claim 3, wherein a reset drain level is determined by using gain of one color of pixel.

11. (original) The CMOS image sensor of claim 3, wherein a reset drain level is determined by using a middle gain.

12. (original) The CMOS image sensor of claim 3, wherein a reset drain level is changed only when gains of all color of pixels satisfy threshold conditions.

13. (currently amended) A CMOS image sensor with reduced image lag comprising:
an imaging device for acquiring image data;
a reset transistor for resetting the image device;
a readout transistor for providing pixel information as an output; and
a selection transistor for selecting between imaging devices, wherein image lag is reduced by controlling a reset level which is switchable between a supply voltage and a supply voltage minus a threshold voltage of the reset transistor; and
an amplifier for determining whether to use a hard reset or a soft reset.

Atty Docket No. JCLA6195

Serial No. 09/886,776

Claim 14 (canceled)

15. (original) The CMOS image sensor of claim 13, wherein the imaging device is a photodiode.

16. (original) The CMOS image sensor of claim 13, wherein all transistors are of a same type.

17. (original) The CMOS image sensor of claim 13, wherein the reset level is independent of a preceding signal level.

18. (original) The CMOS image sensor of claim 13, wherein a drain of the reset transistor is connected to a voltage that is less than a supply voltage minus a threshold voltage.

19. (currently amended) The CMOS image sensor of claim 13, wherein a reset drain voltage ~~can be~~ is switched between a supply voltage and a voltage that is less than the supply voltage minus a threshold voltage.

20. (original) The CMOS image sensor of claim 13, wherein a reset drain level is determined by using gain of one color of pixel.

21. (original) The CMOS image sensor of claim 13, wherein a reset drain level is determined by using a middle gain.

22. (original) The CMOS image sensor of claim 13, wherein a reset drain level is changed only when gains of all color of pixels satisfy threshold conditions.